

Function - every input has only one output

Table A

x	1	2	3	4
y	2	4	6	8

1	2	3	4
↓	↓	↓	↓
2	4	6	8

yes

Table B

x	1	0	1
y	1	2	5



No

Table C

x	1	2	3	4
y	0	0	0	0



yes

Domain → set of inputs  
(x)

Range - set of outputs  
(y)

x	y
3	7
31	63
4.7	10.4
0	1
-11	-21
51	103

$y = mx + b$

• Write an equation,  $y = mx + b$   
for the table

↓ slope  
↓

$$\frac{63-7}{31-3} = \frac{56}{28} = 2$$

• graph your equation

$$y = 2x + 1$$

• Is this a function, why or why not?

$$y = mx + b$$

↓ slope

↓  $y = mx + b$

2nd pt.

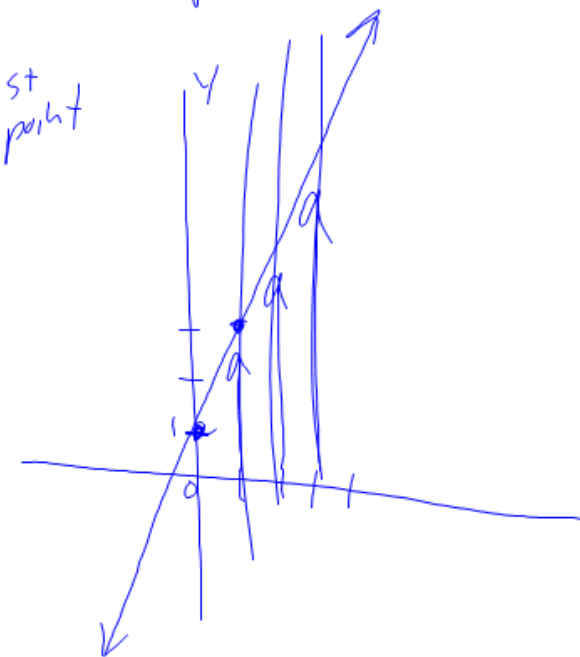
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

↓ slope

$$y = m(x - x_1) + y_1$$

↓ slope

↓ pt.



$$y = 2\left(\frac{3}{2}\right)^x$$

• make a table  
from equation

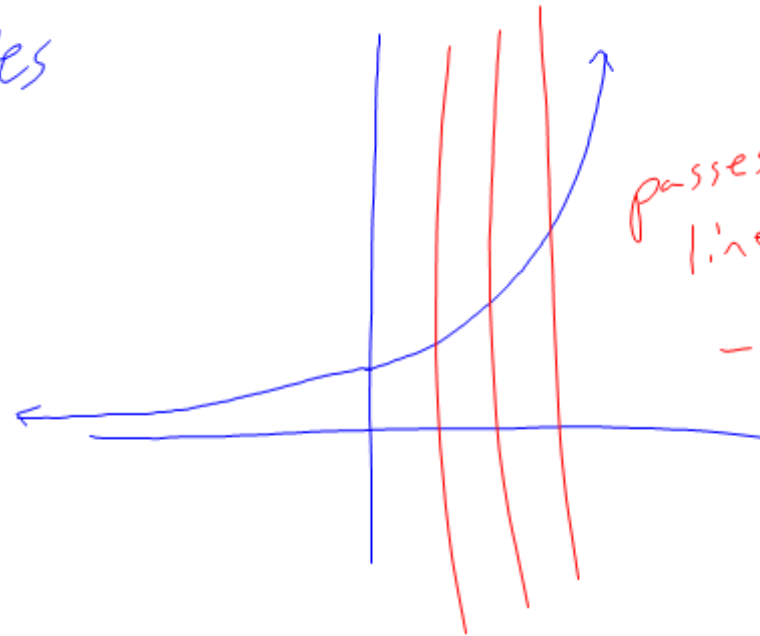


X	Y
0	2
1	3
2	4.5
3	6.75
4	10.125

• make graph from  
the table

• Is it a function?

yes



passes vert.  
line test  
- function

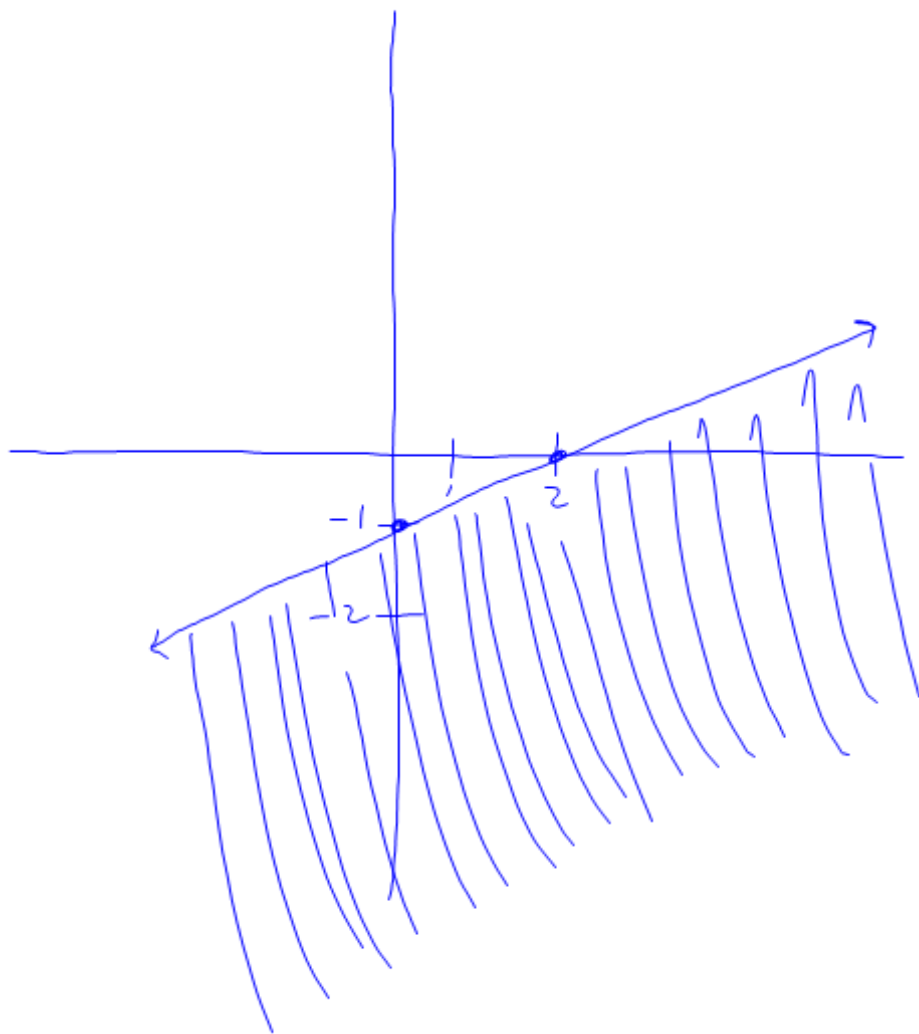
• write an equation for graph

• Is it a function?

$$y \leq \frac{1}{2}x - 1$$

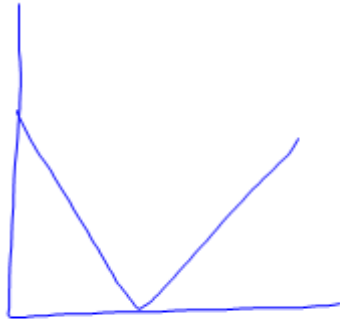
No!

every input(x)  
has multiple  
outputs



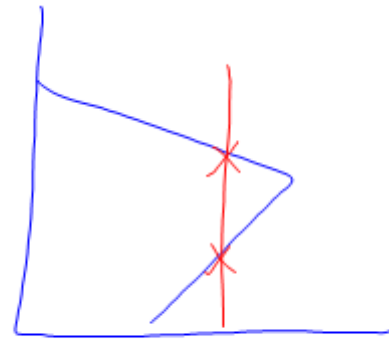
Copy picture - Determine if it is a function

a)



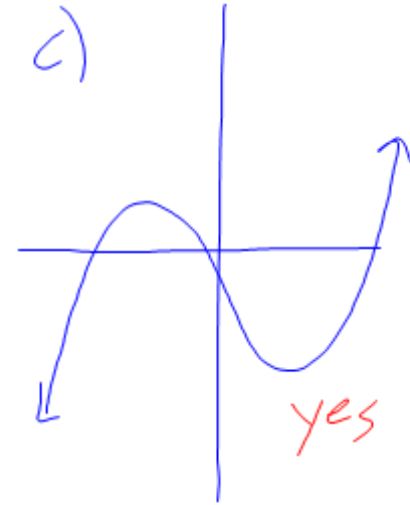
yes

b)



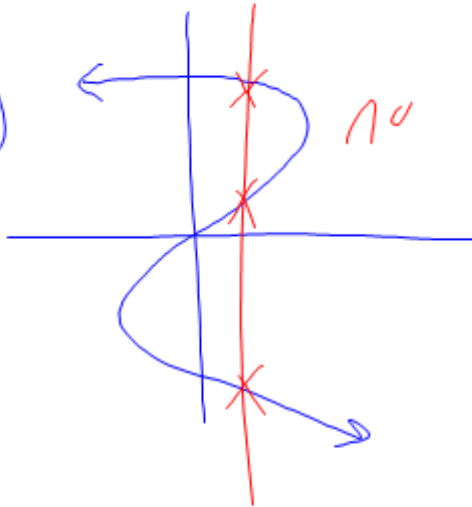
no

c)



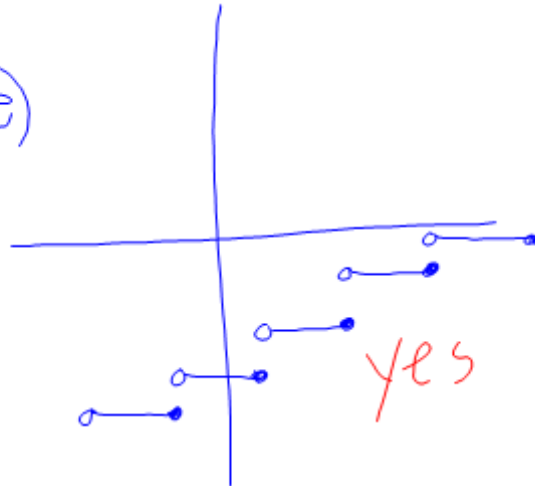
yes

d)



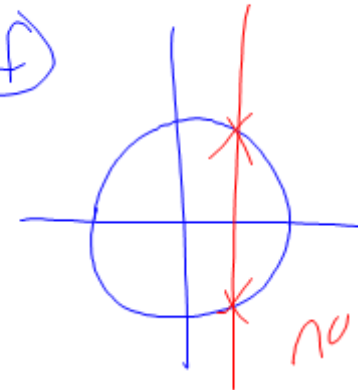
no

e)



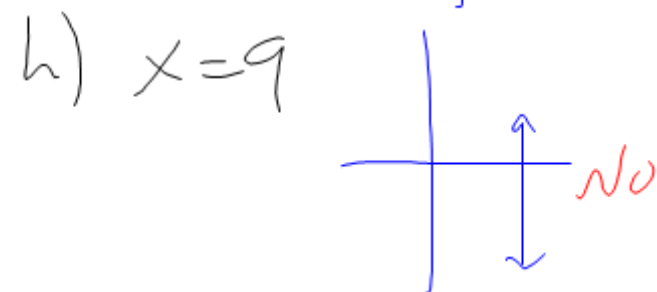
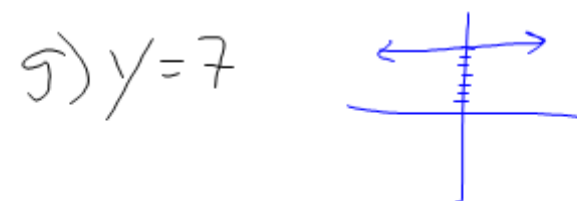
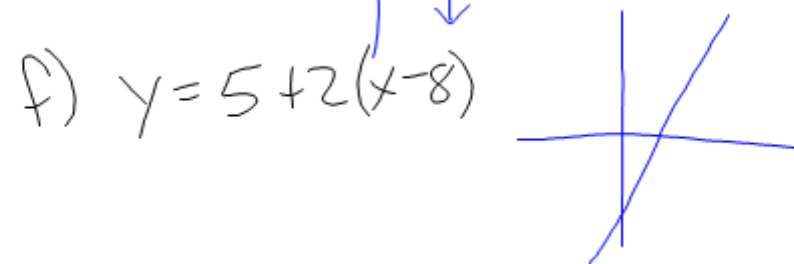
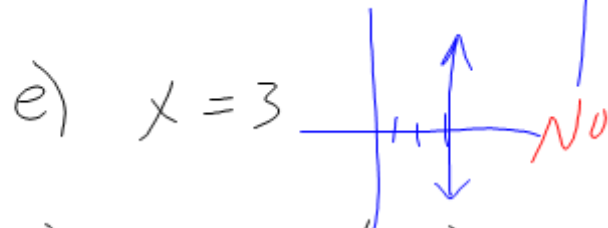
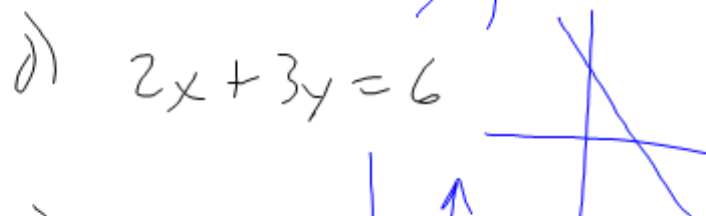
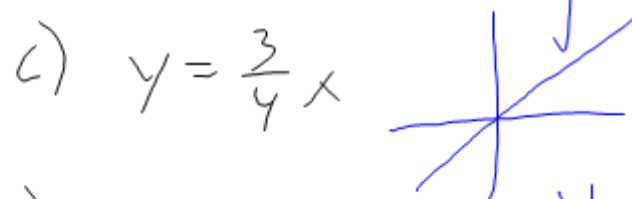
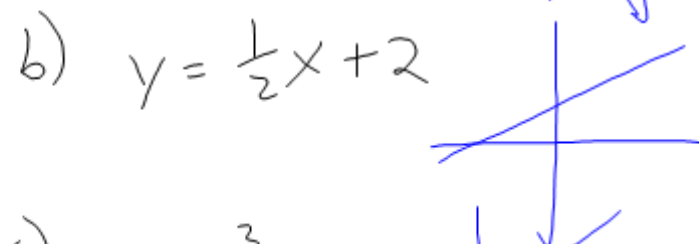
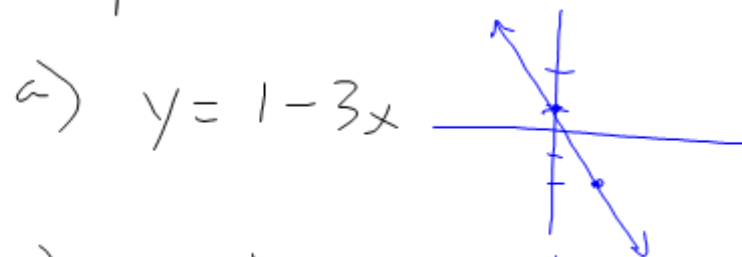
yes

f)



no

Graph each and Determine if it is a function



Hw

8.2 #1-4